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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,966	10/29/2003	Michael Stanley DeCourcy	A01465	7997
2.070	7590 09/21/200 <sup>7</sup> IAAS COMPANY	EXAMINER		
PATENT DEPARTMENT			JOHNSON, EDWARD M	
100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			ART UNIT	PAPER NUMBER
	,		1754	
			MAIL DATE	DELIVERY MODE
			09/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)				
Office Action Commence	10/695,966	DECOURCY ET AL.				
Office Action Summary	Examiner	Art Unit				
	Edward M. Johnson	1754				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNI 36(a). In no event, however, may a vill apply and will expire SIX (6) MON cause the application to become A	CATION. reply be timely filed NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 18 Ju	<u>ıly 2007</u> .					
2a) This action is <b>FINAL</b> . 2b) ⊠ This	This action is <b>FINAL</b> . 2b)⊠ This action is non-final.					
3) Since this application is in condition for allowar	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4)⊠ Claim(s) <u>1-5 and 11-16</u> is/are pending in the application.						
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-5 and 11-16</u> is/are rejected.	6)⊠ Claim(s) <u>1-5 and 11-16</u> is/are rejected.					
	7) Claim(s) is/are objected to.					
8) Claim(s) are subject to restriction and/or election requirement.						
Application Papers						
9) The specification is objected to by the Examiner.						
10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Ex	aminer. Note the attache	d Office Action or form PTO-152.				
Priority under 35 U.S.C. § 119						
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:	priority under 35 U.S.C.	§ 119(a)-(d) or (f).				
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.						
See the attached detailed Office action for a list	or the certified copies not	received.				
Attachment(s)	_					
1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  Paper No(s)/Mail Date						
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date		Informal Patent Application				

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## DETAILED ACTION

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 1-5 and 11-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al. US 6,499,412 in view of Beer '715.

Regarding claim 1, Cochran '412 discloses a method for treating waste streams comprising feeding the stream comprising NOx and CO to a thermal oxidizer or combustor and combusting at a location 18, (see column 4, lines 34-56 and Fig. 1), wherein a stream comprising nitrogen, oxygen, NOx, carbon dioxide, CO, VOCs, and water is analyzed at location 20 downstream from 18 (Fig. 1), and wherein the waste may be liquid waste from acrylonitrile, acrylic acid, or methacrylic acid production (column 1, lines 15-35). Cochran discloses VOCs and hydrocarbons, which would at least suggest aliphatic hydrocarbons and/or aromatics.

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Cochran fails to disclose injecting at a downstream location of a multi-zone thermal oxidizer.

Beer discloses a method for reduction of NOx emissions comprising introducing into a combustor and combusting (abstract and claim 1), wherein the combustor comprises two zones and coal waste gas is introduced at a downstream location (claim 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the downstream injection of Beer in the thermal oxidation waste stream treatment method of Cochran because Beer discloses such injection in a process for treatment of reduction of NOx emissions comprising introducing into a combustor and combusting (abstract and claim 1) to mix with hydrocarbon fragments of fuel, which would motivate the ordinarily skilled artisan to perform such injection so as to achieve such mixing, as disclosed.

Regarding claims 2, 7, and 11-16, apparatus limitations are not given undue weight in method claims. However, Beer '715 discloses a fuel-rich and fuel-lean combustion zone wherein the ratio of fuel to flue gas is 0.1-0.5 (see column 5, lines 10-16 and claim 7).

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Regarding claims 3 and 8, Cochran '412 discloses the waste may be liquid waste from acrylonitrile, acrylic acid, or methacrylic acid production (column 1, lines 15-35).

Regarding claims 4 and 9, Beer '715 discloses combining the waste with a liquid fuel stream (see claim 1 and column 5, lines 8-9).

Regarding claims 5 and 10 Beer '715 discloses hydrogen cyanide is produced and reacted (see column 4).

## Response to Arguments

3. Applicant's arguments filed 7/18/07 have been fully considered but they are not persuasive.

It is argued that the Examiner asserts that Cochran... VOCs and water. This is not persuasive because Cochran discloses VOCs and hydrocarbons, which would at least suggest aliphatic hydrocarbons and/or aromatics. And, in any case, Beer '715 discloses hydrogen cyanide is produced and reacted (see column 4).

It is argued that initially, it is noted that in Beer...

treated and removed. This is not persuasive because Cochran '412

discloses a method for treating waste streams comprising feeding

the stream comprising NOx and CO to a thermal oxidizer or

combustor and combusting at a location 18, (see column 4, lines

34-56 and Fig. 1). One cannot show nonobviousness by attacking

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references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It is argued that additionally, contrary to the claimed... the nitrogen oxides. This is not persuasive for the reasons above.

## Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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Edward M. Johnson Primary Examiner Art Unit 1754

Much

EMJ